Declassified in Part - Sanitized Copy Approved for Release 2011/10/31 : CIA-RDP85T00875R001600030001-1

~~Confidential~~

DIRECTORATE OF
INTELLIGENCE

Intelligence Memorandum

Communist China: Some Economic Aspects Of The New Educational System

~~Confidential~~

ER IM 70-153
October 1970

Copy No. 41

WARNING

This document contains information affecting the national defense of the United States, within the meaning of Title 18, sections 793 and 794, of the US Code, as amended. Its transmission or revelation of its contents to or receipt by an unauthorized person is prohibited by law.

Declassified in Part - Sanitized Copy Approved for Release 2011/10/31 : CIA-RDP85T00875R001600030154-8

CENTRAL INTELLIGENCE AGENCY
Directorate of Intelligence
October 1970

INTELLIGENCE MEMORANDUM

Communist China: Some Economic Aspects Of The New Educational System

Introduction

For three years formal education in Communist China effectively ceased while teachers and students participated in the intrigues and struggles of the Cultural Revolution. By the 1969-70 school year, classes had resumed in most primary and secondary schools. Teachers and students in China's colleges and universities, however, were still being "re-educated" by the workers and peasants. This phase of re-education now seems to be coming to an end, and higher education is beginning to function again.

Most appraisals have centered on the effects of the four-year break in higher education on China's chronically short supply of scientific and technical manpower and have dealt only peripherally with the effects of the upheavals in the primary and secondary educational systems. This memorandum outlines some of the longstanding problems which have beset primary and secondary school education in China and discusses the reforms adopted during and subsequent to the Cultural Revolution to meet these problems. It then relates these reforms to Chinese Communist economic development policy and concludes with an assessment of the long-term outcome of the reforms.

Note: This memorandum was produced solely by CIA. It was prepared by the Office of Economic Research and was coordinated with the Office of Scientific Intelligence.

Students trained under this system were not accustomed to physical labor, could not tell one variety of grain from another, had no practical knowledge of the struggle for production and scientific experiment, and divorced themselves from the working people.
-- Peking domestic broadcast,
20 September 1970

Early Developments

1. The educational system taken over by the Communist regime in 1949 provided for six years of primary school, six years of middle school (three lower and three upper), and four or more years of college and was open to only minuscule segments of the population. The old system was humanistic, urban-oriented, elitist, and responsive to the needs of the ruling classes -- the landowners, the military, and the big businessmen.

2. The long-term aim of the new regime was to reverse this traditional orientation and to root out the scholar mentality of aloofness from technology, manual labor, political struggle, and contact with the lower classes. Under the Communists, science and engineering rapidly expanded in the curriculum at the expense of the humanities in order to meet the requirements of a Soviet-style economic development strategy which emphasized the growth of heavy industry.

3. The number of students enrolled was rapidly expanded in the first years of Communist rule, as follows:

Level	Thousand	
	1949/50	1957/58
Primary school	24,400	64,300
Middle school	1,270	7,060
College	117	441

Practical Problems

4. A number of practical problems for education soon appeared during these early years of expansion:

-- competition for resources for education when industry and construction were being pushed forward so vigorously.

-- special difficulties of the countryside, where school facilities were limited, teachers fewer and less competent, and dropout rates higher.

-- continued necessary reliance on teachers, books, and methods inherited from the old era.

-- the small number of places in the schools in relation to the population of student age and the continued advantage enjoyed by well-connected people in getting their children into the schools. Despite rapidly increased enrollments, only 1% of the college-age group was in college in 1957/58.

5. Whereas the small numbers of graduates of higher level scientific and technical schools were readily absorbed by China's rapidly expanding modern industry, large numbers of primary and middle school graduates were unable either to continue schooling or to find employment. According to one estimate, urban unemployment grew by at least 400,000 annually during the First Five-Year Plan period (1953-57).

Leap Forward Developments

6. In 1958 the regime touted the Great Leap Forward as the solution to the major problems of education and unemployment. A rapid expansion of economic activities along labor-intensive lines and the enthusiastic establishment of "part-work, part-study" schools for a time seemed to have

accommodated everyone who wanted employment or schooling. But it soon became obvious that these solutions were illusive. Many of the new factories produced unusable items and eventually were shut down; many of the work-study schools did not educate and gradually disappeared.

7. As the Leap Forward ebbed in 1959, the old problems reappeared in aggravated form. The authorities again turned to their propaganda apparatus and encouraged China's youth to carve out careers in the rural areas. The regime backed up its propaganda by penalizing those who refused to "go down to the countryside." During the early and mid-1960s perhaps as many as 40 million educated youths and other urban residents were compelled or otherwise persuaded to go to the rural areas to relieve the pressures on China's cities.

8. Many of those sent to the countryside in the late 1950s and early 1960s made valuable contributions. Education in the rural areas lagged far behind urban education, and the injection of additional educated people almost certainly had some positive effect. In rural areas, only 50%-60% of primary-age children were attending schools in some places, and the attrition rate was so high in these areas that perhaps only half of those attending graduated. Furthermore, fewer than 25% of local cadres had more than a primary education. This contrasted with urban areas where frequently 80%-90% of primary-age children were enrolled and where cadres often had some higher education -- for example, 52% of the major governing body in Wuhan had some higher education. But by-and-large those sent down from urban to rural areas knew little or nothing about agriculture and thus were of little use in solving the basic rural problem -- that of modernizing agriculture and raising output.

Skills Required in the Countryside

9. In 1962 the regime adopted a series of policies aimed at restoring growth in China's agriculture chiefly through increasing the availability of modern inputs -- chemical fertilizer, irrigation pumps, electric power, better seed, and more advanced technology. The regime also

recognized that efficient use of these capital inputs to agriculture required more highly skilled agricultural labor. Several national conferences were held in 1964 and 1965 to discuss the expansion of rural work-study schools with an agro-technical curriculum. The focus of these conferences on primary and secondary education suggested that the increasingly large numbers of half-educated and chronically underemployed youth would be used in the struggle for increased agricultural production. These tentative steps toward reorienting primary and secondary education were essentially suspended in 1966-68 during the Cultural Revolution. In 1969, however, the regime readdressed itself to the problem of making better use of China's youth in the countryside.

10. Throughout China, small, yet relatively complete systems of plants currently are being financed and constructed by counties, communes, and production brigades to provide modern and semi-modern inputs for agriculture. Although the small plants are probably most important in the chemical fertilizer industry, small plants for manufacturing and repairing agricultural machinery also have been built, as have small steel, cement, and hydroelectric plants. Agricultural supply, marketing, and credit functions have also been shifted to the local levels -- communes and production brigades -- and personnel working in these fields have been instructed to exert themselves to provide the peasants with timely supplies and credit.

11. These new plants and the commercial and credit network require managers and workers with a basic knowledge of agriculture -- its needs, the timing of activities, and the like -- in order to provide usable, timely inputs. A main objective of the reforms of primary and secondary education adopted in 1969 and 1970 is the expansion of the number of people with such knowledge. An expansion of rural education facilities and a focusing of curriculum on agricultural knowledge is seen by the leadership as a major means of providing China

with a rapidly growing supply of educated manpower on which to base the rural development effort.*

Nature of the Reforms

12. Most of the educational reform proposals are not new to the Chinese leadership. Rather, they are the product of experiences gained from the Resist-Japan University of the Yenan days, the work-study schools of the Great Leap Forward, and those agricultural middle schools and other part-work, part-study people's schools that continued to exist throughout the 1960s. The reforms are spelled out in the paragraphs that follow, but for a quick look at the main features of the old and the new systems, see the chart.

13. Two politically authoritative sources are given as the point of departure for the reforms. One is Mao Tse-tung's 7 May 1966 letter to Lin Piao; the other is Mao's Shanghai Machine Tool Plant directive publicized in July 1968. The former asserts that "while the students' main task is to study, they should, in addition to their studies, learn other things; that is, industrial work, farming and military affairs." In the Shanghai Machine Tool Plant directive, Mao reportedly remarked: "It is essential to shorten the length of schooling, revolutionize education, put proletarian politics in command, and take the road of the Shanghai Machine Tool Plant in training technicians from among the workers. Students should be selected from among workers and peasants with practical experience, and they should return to production after a few years' study."

---

* *The conclusions of several Western economists -- notably, Abramovitz, Kendrick, Denison, and Schultz -- that the tremendous increases in per capita product in the now-developed countries derive primarily from a rise in efficiency, point out the importance of an educated work force. Technical knowledge does not automatically take root in a traditional society. It can, and does, establish itself when that society has had many of its members exposed to a more systematic approach to knowledge, especially knowledge related to production and distribution.*

COMMUNIST CHINA: CHANGES IN THE EDUCATIONAL SYSTEM

Former System	Reformed System
Higher Education	
Limited physical and personnel facilities; less than 1% of primary enrollment accommodated.	Expanded facilities; higher enrollments.
Four to six years in length.	Two to three years in most cases.
Large number of required courses, particularly in technical schools.	Small number of basic and applied courses.
Student body primarily from well-to-do backgrounds, largely as a result of competitive examinations.	Larger numbers of students with two or more years of PLA, farm, or factory experience, and admitted via party and "mass" recommendation.
An elite system of "key" schools, with "ordinary" schools for those unable to enter "key" schools.	Elitist features will be less prominent.
Symbolic participation in productive labor.	Productive labor performed in school-run facilities or nearby communes.
Middle School Education	
Limited facilities; junior middle schools accommodating less than 10% of primary school graduates. Senior middle schools enrolling less than 20% of junior middle school graduates.	Expanded facilities and enrollment.
Three years of junior middle school and three years of senior middle school.	Four years of combined junior-senior middle school.
Curriculum geared toward college entrance.	Curriculum oriented toward practical economic tasks.
State-operated by Ministry of Education operating through commune, county, and municipal education bureaus.	Operated by production brigades and communes in rural areas; by factories in urban areas.
Located chiefly in urban areas.	Much larger numbers located in rural areas.
Primary Education	
Six years in length.	Five years in length.
Upper divisions generally located only in market towns; lower divisions in villages.	Located in the villages.
Control by Ministry of Education.	Control by communes and brigades (rural) or by factories (urban).

14. The specifics of the reforms which stemmed from these directives vary by locale and type of school, but the reforms can be outlined briefly, as follows,

The heretofore twelve years of primary/middle school education is to be shortened to nine or ten years, while higher education is generally to be of two or three years' duration;

The curriculum is to be pared to a core of essential courses -- including politics and the thought of Mao Tse-tung;

More importantly, courses are to be more specifically related to industrial and agricultural production and examinations are to test the students' ability to analyze and solve problems rather than their ability to memorize;

The responsibilities for financing and operating primary and middle schools are to be shifted from the central authorities to local units, and workers and peasants are to participate in administration and management as well as assist in teaching the practice-oriented courses;

Both theory and its applications are to be taught, but productive labor is to receive greater emphasis than in earlier years;

Finally, criteria for admission of students to intermediate schools and colleges are heavily weighted toward those having work experience.

Reforms in College-level and Intermediate Technical Education

15. For intermediate technical schools, agricultural colleges, and medical colleges the reforms give top priority to the "popularization of knowledge." For many institutions of higher education this means relocation in the countryside. It is reported that all colleges and universities in Wuhan are to be sent out to the countryside and that only nine of 62 colleges remained in Peking as of February 1970. A common method of popularization is the mobile team of instructors who not only teach the peasants but also help them solve immediate problems. For example, technical teams will be teaching the peasants the basic principles of electric power generation as well as helping them solve the more difficult problems they encounter in constructing small hydroelectric plants.

16. Although the emphasis is on popularization, quality education and research are not to be neglected. "Barefoot doctors" are acknowledged to be lacking in systematic theoretical knowledge and consequently are unable to "save patients in a critical state or to perform surgical operations." Thus advanced courses are to be run for select students in order to train medical personnel "complete with ability and integrity." As for medical

research, it has been suggested that "some teaching staff should also be kept in the colleges themselves . . . for carrying out research in doubtful and difficult cases and for essential high-standard, incisive, and pioneering projects." Clearly, quality education and research are not being abandoned.

17. Reform in colleges of science and technology focuses on closer cooperation of schools, factories, and scientific research units. Interestingly, reforms with similar cooperative objectives are being undertaken in the USSR. In East Germany, such cooperation has existed for some time. Important features of the Chinese reforms are student labor in nearby factories, selection of students from among workers and technicians, the combination of theory and practice, and cooperation with factory labor and management to solve production problems.

18. The regular course of study is to last two to three years, broken into three stages. In the first stage the student goes into the factory where teaching is combined with production of typical products. In the second stage the student returns to school to improve his theoretical understanding of what he has learned in the factory. Finally, he goes back to the factory where he does research and develops his skills in analyzing and solving production problems.

The Tsinghua Example

19. A recent *Red Flag* article revealed that Tsinghua University, perhaps China's most prestigious scientific and technical university, enrolled "nearly 600" students for experimental classes in March 1969.* This year the university plans to enroll a total of 2,500 students. Citing how Tsinghua has carried out the basic reforms, the article goes on to criticise those who "put on an

25X1

extremely 'left' appearance" and distort the party's policy toward the intellectuals. Those of the original teaching staff who cannot be politically remoulded are "very small in number" and the intellectuals must be used while being re-educated. The article also concedes that the education of quality scientific-technical manpower may take more than two or three years; aside from the two-year or three-year "ordinary" system there are to be "advanced" classes.

20. Although an enrollment of 2,500 students is still far below Tsinghua's 10,000 student capacity, the developments reported in the article demonstrate that progress has been made in restoring higher education. The report also suggests the possibility that university education may reach a semblance of normality in the fall of 1971.

Liberal Arts Colleges

21. Liberal arts colleges present a particular problem to the leadership, and the role these schools will play is not yet clear. By the mid-1960s, many of China's new economic, cultural and educational, and administrative cadres were graduates of liberal arts colleges. The schools are apparently to continue to provide administrators for the state apparatus. But under the reforms, liberal arts students will no longer be exposed to general education in the humanities but will concentrate on more practical subjects, such as economics, accounting, and modern languages. In addition, a system of participation in "social surveys" is envisioned whereby students will be exposed to the problems confronting factory and farm management in making administrative and economic decisions. Press discussions of the reforms suggest that new liberal arts curricula will not be firmed up until the results of some of these surveys provide information as to which subjects and skills are particularly needed.

Primary and Middle School Reforms

22. The lack of employment opportunities and the constraints upon continuing education in Communist China have particularly affected those

members of the population between 7 and 18 years of age. The reforms of primary and middle school education are aimed at this group, who constitute about one-fourth of the total population. The key document for reforming the lower levels of education is the "Program for Primary and Middle School Education in the Rural Areas," published in May 1969. While the draft program is focused on reforms in rural areas, other statements by the regime have made it clear that parallel reforms are being undertaken in urban areas. In general, the reforms are aimed at shifting the responsibilities for primary and middle school curriculum control, administration, and financing from central and provincial governments to local units. In the rural areas, this means that, generally, production brigades will be responsible for primary education while communes will be responsible for middle schools. In the urban areas, such tasks will be undertaken by neighborhood associations and factories, respectively. These are not hard-and-fast rules, however; whenever such arrangements are not feasible or convenient, other arrangements may be made.

23. Funds for rural education apparently must now come from commune or production brigade accumulation funds and/or a system of fees. While school-owned farm plots cultivated by students and teachers could contribute to the support of the schools, this source of funds is not likely to be large. In the urban areas the welfare funds of factory workers and a system of fees will probably be the sources of funds.

24. Several reasons have been given for the shift of formerly state-operated schools to local units. Initially, the point was made that local financial support would free state funds for other tasks. More recently, however, the benefits of local or neighborhood control have been stressed. It is now argued that with workers and peasants assuming greater responsibilities for operating the schools, worker-peasant children will not be excluded as they were in the past. While all children are eligible to attend primary schools, enrollment for middle schools is to be both by recommendation and selection, with priority given to children of workers, poor and lower middle

peasants, revolutionary martyrs, and the military. Reports of significantly increased enrollments in the countryside indicate that establishing schools at the brigade and commune levels has apparently made it possible for more peasant children to attend school. The actual impact may be less than currently reported, however, because dropout rates are very high. Local financial control also appears to be having additional effects on rural education. Because they are paying for the schools, peasants appear to be demanding that the schools produce accountants, technical personnel, and the like who will be of practical use to the brigade in production or administration.

Curriculum Reforms in Primary and Middle Schools

25. The changes in curriculum in primary and middle schools have so far been extremely general in nature. Five courses are to be taught in rural and urban primary schools: politics and language, arithmetic, revolutionary art and literature, military training and physical culture, and productive labor. The proposed middle school curriculum for rural schools is similar, with arithmetic replaced by a course in "basic knowledge for agriculture" -- including mathematics, physics, chemistry, and economic geography. Another version includes mathematics, physics, and chemistry in addition to the course in agriculture.

26. Besides courses in Mao Tse-tung thought, revolutionary art and literature, and military training and physical culture, the urban middle school curriculum will contain courses in both "basic industry" and "basic agriculture." The basic industry course will contain lectures on mathematics, physics, and chemistry "relating basic industrial knowledge and theory to practice" as well as to "Chairman Mao's directive on building industry."* The basic agriculture course will tie in "Mao's directive on agricultural production"*

* *There is no indication of the actual content of these directives.*

with lectures on economic geography, biology, meteorology, physics, chemistry, and mathematics -- all as applied to farm techniques. Students will also be taught about fertilizers, insecticides, water conservation, and farm industry.

27. While these courses are intended to give a basic understanding of the sciences involved in agro-techniques, there has been continuing discussion in the Chinese press as to how much class time is to be spent on these courses compared with that spent on political study. Acknowledging the primacy of politics, the rural draft program notes that "it is appropriate for these courses (on general knowledge and culture) to account for about 60% of the periods for study in middle school and not less than 70% in primary school." Although no similar caveats exist for urban schools it is clear that they too are to devote relatively more time to academic subjects.

28. The difficulty of convincing local education cadres that a curriculum containing academic subjects is not "revisionist" has been a persistent obstacle. An incident reported by the *South China Daily* describes how local authorities handled this aspect of the educational revolution. In one brigade the peasants had taken over the administration of a school and had immediately turned everyone's attention to the study of the thought of Mao Tse-tung. Soon, however, some of the students and teachers complained that the curriculum was "monotonous." They were taught only politics and nothing else, and morale and study habits began to suffer. The commune revolutionary committee then expanded the curriculum to include courses in industrial techniques, agricultural techniques, and military affairs. By holding up this action as exemplary, the Canton authorities apparently were attempting to give guidance to other communes encountering similar difficulties.

Productive Labor

29. The draft reforms dealing with curriculum in rural areas call for formal courses in "productive labor" and the establishment by primary and middle schools of "bases for production." The relationship

between productive labor and bases of production is clarified in the draft, as follows: "The primary way is for the students to participate in production in the people's communes, the production brigade and the production team, while their participation in labor arranged by the schools is supplementary. . . ." This implies that, on the one hand, productive labor classes will be related to basic agricultural sciences perhaps as applied to school experimental plots; on the other hand, ordinary farm tasks in their home teams or brigades will continue to occupy most of the students' time.

30. Establishing a system whereby students at urban schools participate in productive labor is more complex. One solution to this problem is the establishment of branch schools in the rural areas. In Canton, reports indicate that as many as 50% of the students are being sent to rural branch schools where they spend six months. Each week they "are required to do two days' general farm husbandry, two days' normal school study, and two days' practical farm work on the land." Such branch schools also serve to facilitate the assignment of students to rural areas upon graduation.

Teachers

31. The problem of staffing an expanded primary and secondary school system stems from both the general shortage of trained teachers and the fact that few teachers are familiar with the new curriculum. The regime has insisted that the overwhelming majority of old teachers can be used while undergoing ideological "re-education." The state has also increased the number of teachers in the countryside by ordering many urban teachers back to their home villages to teach in the new schools. Other additions to the rural teaching force will come from educated young people and cadres sent down to the countryside as well as from local peasants who possess practical agricultural skills. Other categories of personnel will provide part-time teachers for the applied courses -- that is, a brigade accountant will be teaching accounting principles, and demobilized soldiers will teach military affairs and physical culture.

32. The regime is aware that most of the new teachers are not qualified and arrangements have been made to upgrade professional competence. Recently, the press has reported the establishment of training classes for middle school teachers. Though the length of the classes -- six months in one case and 40 days in another -- reflects a low level of training, these classes do indicate that the authorities are attempting to upgrade the quality of rural teaching. At least one province (Kiangsu) is reportedly assigning most of its recent college graduates to teach in rural middle schools, with many actually being assigned to primary schools.

Outlook and Conclusions

33. The proposed reforms are broad in scope and affect the entire educational system. They have not been under way long enough, however, to determine precisely the details of their operation or to judge their effectiveness. The permanence of the reforms seems very much dependent upon the continued influence of Mao Tse-tung -- who has been closely associated with educational reform since the mid-1960s. His death could lead to a return to the methods and emphases of the early 1960s. On the other hand, a decision on his part to pursue the reforms with more speed or in more radical form could lead to chaos in the educational system. So long as a reasonable balance between politics and practical education in curricula is maintained and there continue to be allowances for diversity in administration and orientation, the outlook is for a quantitative upgrading of Chinese education. That is, while the overall quality of education in China almost certainly will decline under these reforms, a much larger proportion of the population may be able to acquire the rudiments of education.

34. As presently administered, the reforms are likely to have a mixed impact on the Chinese Communist economy. In higher education, Chinese discussions of the simplification of curricula and the shortening of courses imply that the leadership may be hazarding the flow of well-trained scientific and technical personnel required for their priority

programs. But this interpretation appears misleading. It seems more likely that reforms in higher education will be selectively applied in scientific and technical areas. Thus it appears that provisions are being made to ensure that a new system of higher education will continue to supply highly trained individuals who are capable of dealing with the complex problems of military and industrial science and technology. The deep-rooted priority of China's development of modern weapons will outweigh the political aims of the educational reforms when it comes to the concrete application of the reforms.

35. The reforms of primary and middle schools in general appear to be a systematic and realistic method of providing a modicum of education for larger numbers of hitherto uneducated youth. Furthermore, the emphasis on practical knowledge for industry and agriculture appears part of a schema aimed at solving the unemployment problem among China's youth.

36. The main economic significance of these reforms, however, lies in the role they are intended to play in the regime's effort to speed up rural economic development. The success of the small plant construction program and of the attempt to raise agricultural output through the mobilization of local resources is partly dependent on the provision of more highly skilled labor from these new schools. By shifting the responsibilities for these programs from central to local authorities in the spirit of "self-reliance", the regime has set into motion a local cost-benefit calculus whereby the returns from education, as well as from new small plant construction, will be weighed against the costs involved. The regime clearly believes that the prospects of these programs for raising incomes and increasing job opportunities in the rural areas constitute sufficient incentives for the local authorities to pursue them aggressively.